

Rpt. 4.

REPORT ON MACHINERY.

No. 83/42

21 DEC 1921

Received at London Office

WED. DEC. 28 1921

Date of writing Report

19

When handed in at Local Office

19

Port of

LIVERPOOL

No. in Survey held at
Reg. Book.

Queensferry.

Date, First Survey 2nd Sept/21 Last Survey 19th Dec 1921

(Number of Visits 8)

on the

Screw Steamer "Shell Mer IV."

Gross 423
Net 227

Master

Built at

Queensferry

By whom built

J. J. Abdela + Mitchell + Co. Ltd.

When built

1921.

Engines made at

Brimscombe.

By whom made

J. J. Abdela + Mitchell + Co. Ltd.

when made

1921.

Boilers made at

Birkenhead.

By whom made

Cammell Laird + Co. Ltd.

when made

1921.

Registered Horse Power

Owners Eagle Oil Transport Co. Ltd.

Port belonging to

London

Nom. Horse Power as per Section 28

59.

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

yes.

ENGINES, &c.

Description of Engines

Compound, Inverted.

No. of Cylinders

2

No. of Cranks

2

Dia. of Cylinders

15 1/2" 32"

Length of Stroke

24

Revs. per minute

110

Dia. of Screw shaft

as per rule 7-01

as fitted 7-2

Material of screw shaft

steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

yes.

Is the after end of the liner made water tight

in the propeller boss yes. If the liner is in more than one length are the joints burned

✓

If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

✓

If two

liners are fitted, is the shaft lapped or protected between the liners

✓

Length of stern bush

2'-4"

Dia. of Tunnel shaft

as per rule 6-56

as fitted 6-3

Dia. of Crank shaft journals

as per rule 6-89

as fitted 6-3

Dia. of Crank pin

6 3/4"

Size of Crank webs

13 1/2 x 5"

Dia. of thrust shaft under

collars

6 3/4"

Dia. of screw

4'-0"

Pitch of Screw

9'-3"

No. of Blades

14

State whether moveable

No

Total surface

29 1/2'

No. of Feed pumps

1

Diameter of ditto

2 3/4"

Stroke

10 1/2"

Can one be overhauled while the other is at work

✓

No. of Bilge pumps

1

Diameter of ditto

2 3/4"

Stroke

10 1/2"

Can one be overhauled while the other is at work

✓

No. of Donkey Engines

One.

Sizes of Pumps

3 1/2, 5"

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

2 - 2 1/2" Steam ejectors to P.S. 2" oil well suction + bilge

In Holds, &c.

1 - 2" steam ejector to bilge

No. of Bilge Injections

1

sizes

3"

Connected to condenser, or to circulating pump

Air pump

Is a separate Donkey Suction fitted in Engine room & size

yes. 1-2"

Are all the bilge suction pipes fitted with roses

yes.

Are the roses in Engine room always accessible

yes.

Are the sluices on Engine room bulkheads always accessible

none.

Are all connections with the sea direct on the skin of the ship

yes.

Are they Valves or Cocks

both.

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

yes.

Are the Discharge Pipes above or below the deep water line

above.

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

yes.

Are the Blow Off Cocks fitted with a spigot and brass covering plate

yes.

What pipes are carried through the bunkers

none.

How are they protected

✓

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

yes.

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

yes.

Is the Screw Shaft Tunnel watertight

✓

Is it fitted with a watertight door

✓

worked from

✓

BOILERS, &c.

(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers

1135 1/2

Is Forced Draft fitted

no

No. and Description of Boilers

One Cylindrical Mult. Boiler.

Working Pressure

130 lbs.

Tested by hydraulic pressure to

260 lbs.

Date of test

3-12-20.

No. of Certificate

2157.

Can each boiler be worked separately

✓

Area of fire grate in each boiler

oil fired.

No. and Description of Safety Valves to

each boiler

2 Direct Spring.

Area of each valve

5.94"

Pressure to which they are adjusted

135 lbs.

Are they fitted with easing gear

yes.

Smallest distance between boilers or uptakes and bunkers or woodwork

14"

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets.

plate

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

bottom

Thickness of plates

crown

bottom

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Steam dome: description of joint to shell

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the superheater which can be shut off from the Boiler

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

Lloyd's Register
Foundation

IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *Two top & 2 bottom end bolts & nuts. 2 main bearing bolts & nuts. Set of coupling bolts. sets of air circulating, feed & bilge pump valves. 1 check valve. 1 safety valve spring & assortment of bolts, nuts & iron of various sizes.*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops --
During erection on board vessel --
Total No. of visits

1921. Sept. 7. 12. Oct. 16. Nov. 9. 18. Dec. 9. 17. 19.

8

Is the approved plan of main boiler forwarded herewith

yes.

" " " donkey " " " *✓*

Dates of Examination of principal parts—Cylinders *✓* Slides *✓* Covers *✓* Pistons *✓* Rods *✓*

Connecting rods *✓* Crank shaft *✓* Thrust shaft *Sheffield. 2/1/21* Tunnel shafts *✓* Screw shaft *Sheffield. 2/1/21* Propeller *9/11/21*

Stern tube *2/9/21* Steam pipes tested *Hull 25/11/21* Engine and boiler seatings *9/11/21* Engines holding down bolts *18/11/21*

Completion of pumping arrangements *19/12/21* Boilers fixed *18/11/21* Engines tried under steam *19/12/21*

Completion of fitting sea connections *2/9/21* Stern tube *2/9/21* Screw shaft and propeller *9/11/21*

Main boiler safety valves adjusted *9/12/21* Thickness of adjusting washers *P-23 3/4, S-25 64*

Material of Crank shaft *✓* Identification Mark on Do. *✓* Material of Thrust shaft *steel* Identification Mark on Do. *LLOYD'S. N° 5555, J.P.*

Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts Identification Marks on Do. *LLOYD'S. N° 5554, J.P.*

Material of Steam Pipes *Copper.* Test pressure *260 lbs.*

Is an installation fitted for burning oil fuel *yes.* Is the flash point of the oil to be used over 150°F. *yes. ✓*

Have the requirements of Section 49 of the Rules been complied with *yes. ✓*

Is this machinery duplicate of a previous case *yes. ✓* If so, state name of vessel *"Ansona." "Shell Mer V."*

General Remarks (State quality of workmanship, opinions as to class, &c. *This machinery—Engine, Bristol Rpt. 10828.*

Boiler, Liverpool Rpt. 81976—has been securely fitted on board & satisfactorily tried under steam. it is eligible in my opinion for classification & to have record & Club 12. 21.

W.P. 130 lbs. Fitted for oil fuel 12. 21. F.P. above 150°F. — See Secretary's letters of June 8. 10 & 23. 1921.

It is submitted that this vessel is eligible for THE RECORD.

± L. M. C. - 12. 21. C. L.

Fitted for Oil Fuel, 12. 21, F.P. above 150° F.

MACHINERY CERTIFICATE WRITTEN

28/12/21.

ARK

Amount of Entry Fee *£ 3 : 8*
Special ... *£ :*
Donkey Boiler Fee ... *£ :*
Travelling Expenses (if any) *£ 2 : 1/9.*

When applied for, *23 DEC 1921*

When received, *19*

Committee's Minute *LIVERPOOL 23 DEC 1921*

Assigned *± L. M. C. 12. 21*

Fitted for oil fuel 12. 21 & above 150°F

A. J. Barrett

Engineer Surveyor to Lloyd's Register of Shipping.

CERTIFICATE WRITTEN *24/12/21*



© 2020

Lloyd's Register Foundation